# Aeronix Radio Emulator

**Integration and Test Tool**

## Radio Emulator Technical Summary

The Radio Emulator is an integration and test tool for the laboratory that provides the capability to connect up to four IDM products together without having to use actual radios. The Radio Emulator provides all the signals necessary to connect the modems and emulate both synchronous and asynchronous radios. Data rates are adjustable from 300 baud to 16,000 baud, and the data can be selectively inverted.

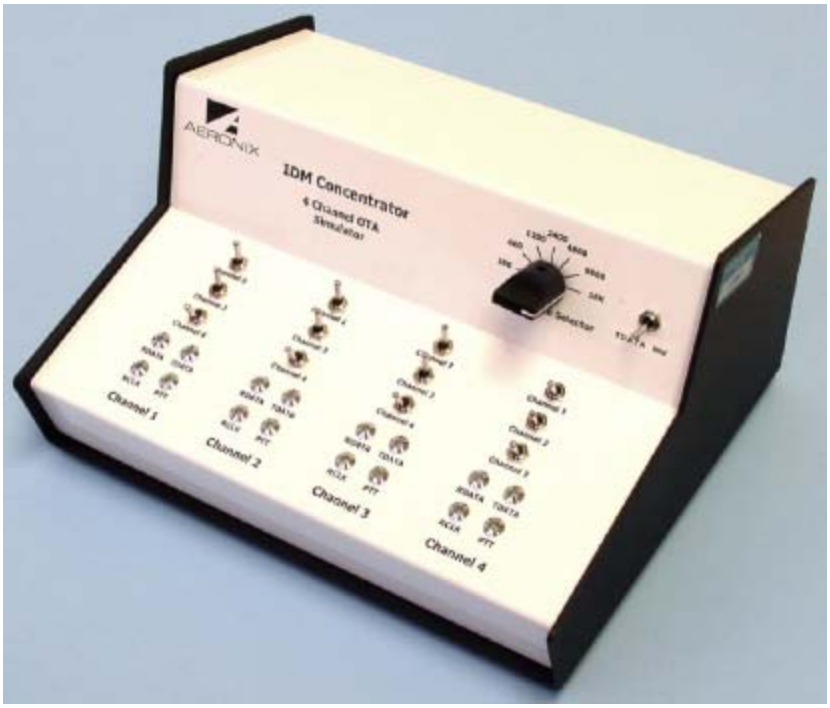
The Radio Emulator allows the user to control the connectivity between each of the four channels, facilitating simulation of partially-connected networks and platforms joining or leaving the network. Indications of clocks, RX Data, TX Data, and PTT are provided via LED feedback. In addition to the Symetrics IDM products, the Radio Emulator will also interface to other modem products, such as the Raytheon TacLink™ and CECOM Protocol Test Tool (PTT).

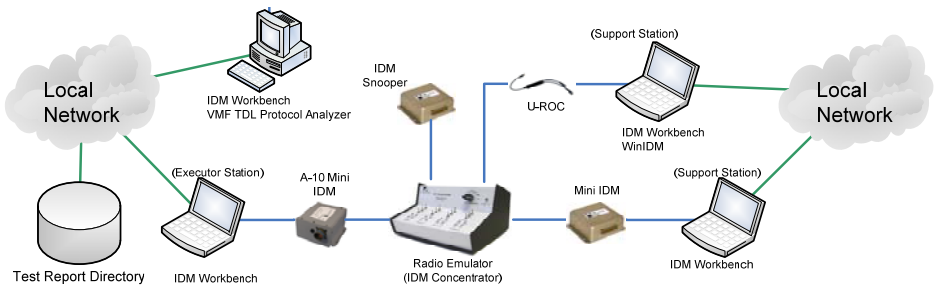
## IDM Overview

In 2001, Aeronix partnered with Symetrics Industries to develop the Improved Data Modem (IDM) 501/IDM Junior™, VPIDM, and Mini IDM suite of Tactical Data Link (TDL) products. This IDM family has grown to include the Weapons Data Link IDM (WDL IDM), and now, the U-ROC and WinIDM, providing a USB and Software solution to the TDL community.

Our IDMs are integrated and deployed in a variety of military platforms worldwide. Through this partnership, Aeronix has taken an active leadership role in the Combat Net Radio Working Group (CNRWG) to ensure interoperability of your MIL-STD-188-220/MIL-STD-2045-47001-based Tactical Data Link (TDL).

AERONIX SYMETRICS INDUSTRIES




## Related Technologies

### IDM Workbench™

The IDM Workbench™ application provides complete host emulation for operating any of the Symetrics IDM products. IDM Workbench™ includes a powerful scripting language for automating interactions with the IDM, providing the ability to easily drive simulation, perform integration stress testing, or perform regression testing.

### Mini IDM™

The Mini IDM is designed as a "low-cost" data link for air-launched munitions and for UAV applications where a lightweight, low-power, extremely small LRV can be integrated. The modem electronics are designed to PC/104 mechanical form factor for rapid integration into existing customer PC/104-based LRUs.

### WinIDM™

WinIDM™ provides customers with a software-only implementation of the VMF TDL, featuring the F-35 Joint Strike Fighter (JSF) MIL-STD-188-220 D Change Notice 1 Protocol Stack, as well as legacy support for MIL-STD-188-220 B/C, AFAPD, and TACFIRE tactical data links. WinIDM™ can be combined with the U-ROC™ to provide a complete TDL solution or paired with NetSim™ for simulation and testing.

### U-ROC™

The Symetrics USB Radio Operations Cable (U-ROC™) is designed to allow personal commuters, ruggedized laptops, and personal digital assistants (PDAs) to interface to any radio in the field today, the U-ROC™ combines the radio interface capability of the Improved Data Modem (IDM) with the accessibility of the USB standard. The U-ROC™ provides customers with a low-cost, low-power solution ideal for integration into ground kits and laboratory testing environments. By providing two separate radio data interfaces, complete with remote control ports for the radios, combined with Modular Radio Connectors, programs save on non-recurring design and integration costs, recurring maintenance and logistics costs, and depot and spares costs.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